

Q&A

VEX V5 Robotics Competition 2026-2027: Override

Tagged: R24

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3146: 2mm thickness plastic legal?

16-May-2026

R24

Do 2mm thickness plastic legal?

Answered by committee

2mm Plastic is not legal, per R24.

Plastic thickness is limited to 0.070" (1.78mm)

A metric conversion will be added in the June 4 game manual update.

3129: Legality of reinforced plastic - R24

14-May-2026

R24

Rule <R24> governing custom plastics states: Legal plastic types are polycarbonate (Lexan), acetal monopolymer (Delrin), acetal copolymer (Acetron GP), POM (acetal), ABS, PEEK, PET, HDPE, LDPE, nylon (all grades), polypropylene, PTFE, and FEP.

Certain manufacturing styles, such as SRPP (Self-Reinforced Polypropylene) or SR-PET, use a woven structure of a specific polymer embedded within a solid base of that exact same polymer to increase strength. These materials do not

contain any glass, carbon, or other foreign additives. They are made physically and chemically of 100% pure polymer. If a material is made entirely of a single plastic explicitly listed in <R24>, but utilizes this internal self-reinforced woven structure, is it considered legal provided it meets all other rule requirements (such as being non-shattering, staying within the maximum 0.070" thickness, and adhering to the individual piece limits)?

Answered by committee

Note: This answer was revised on July 2, 2026.

In the July 2 game manual update, [<R24>](#) clause F was updated to include non-homogeneous plastics, such as woven (e.g., SRPP) and/or fiber-reinforced sheets, as prohibited materials.

3064: Clarification on Inspection Questions

28-Jan-2026

[R24](#) [R27](#)

[<R27>](#)

At a recent event that our team went to, there were a couple of items mentioned during the inspection which the team has never been asked before and we wanted to seek clarification on them-

1. The inspectors mentioned that to be legal, the VEX stickers must be visible on the air cylinders. We are not able to find such a rule in the game manual, and [<R24>](#) states that visual decorations are allowed, and our team has wrapped the air cylinders with black tape to match the team's robot color scheme. If this occurs again, we are thinking of bringing a cylinder without the tape to show the inspectors going forward. Is this acceptable, or should the team just remove the tape from the cylinders already on their robot?
2. The inspectors also asked the team whether they used any loctite. [<R27f>](#) allows the use to loctite. So we were wondering if there is a limitation on the use of Loctite. The team uses Blue loctite which is what we believe to be the legal one.

Thank you in advance.

Answered by committee

1. Decorating air cylinders with stickers, tape, or other similar materials is currently subject to the judgment of the inspector and Head Referee, and may be allowed. However, it is likely that we'll add some restrictions beginning with the next game manual update to ensure that inspectors and Head Referees can easily and quickly confirm that the cylinders are legal parts.
2. Clause F of rule [<R27>](#) allows the use of Loctite or similar thread-locking products to secure mechanical fasteners. This allowance only applies to fasteners, and Loctite cannot be used for any purpose anywhere else on the Robot.

3032: Is using two radios legal

11-Jan-2026

[R24](#)

Many teams use multiple radios for reliability, but R24 - C states that: "VEX electronics may not be used as non-functional decorations", and my understanding of the radios is that only one is active at a time, meaning the other one would act as a "non functional decoration", thus making it illegal.

Thank you for your time -4886S

Answered by committee

There is no rule that prohibits using multiple VEX V5 radios on a V5RC Robot.

2976: R6 Custom License Plates and Tape

8-Dec-2025

R6 R24

I want to check the validity of using white take to make the letters of a license plate more visible. Consider the following arrangement:

1. A plate of VEX structural material is cut to the appropriate size and painted/powder-coated per the example provided in Figure R6-2.
2. White tape is applied over the white paint of the numbers to make them more legible. [<R6>](#)

I ask because honestly the plate in figure R6-2 is painful to look at, I think I would struggle as Head Ref to easily identify the numbers because of the pattern of holes across the plate. Adding the tape would cover the holes, breaking up the pattern and making the numbers easier to read.

What would be the ruling regarding the intersection of R6 and R24 in the following cases:

1. White tape is applied on top of white paint. I believe this would be a non-functional decoration because removing the white tape simply exposes the white paint beneath.
2. White tape is applied on top of unpainted metal. I believe this would be a violation of R24 because the team number would ONLY be written in white (R6.f) if the tape was not removed, making the tape a functional decoration.
3. White tape is applied on top of metal painted the color of the license plate (i.e. the plate is painted a solid color and removing the tape means it looks functionally the same as a blank license plate). I believe this is a violation of R24 because removing the tape removes the team number, making the tape a functional decoration.
4. Any other color tape applied in place of white in the above examples. I believe this is a violation because of R6.f (team numbers must be written in white).
5. What if red and blue tape were used to color the plates rather than paint or powder-coating. I believe this is a violation of R24 because the tape is functional.

Answered by committee

Rule [<R22>](#) provides a few legal uses of tape, and does not include license plates or Team numbers on license plates.

However, the white number/letter stickers provided with the standard license plate kit are legal for use on Robots. Similar white, legible letter/number stickers, whether purchased or team-created (e.g., cut from adhesive vinyl using a cutting machine), are also legal options. We'll attempt to make this guidance clearer in a future game manual update.